

Geological Technics Inc. _____

REPORT

Groundwater Monitoring 3rd Quarter 2005

**Ham Station
34950 Hwy 88
Pioneer, Amador County, CA**

**Project No. 808.2
October 26, 2005**

**Prepared for:
Mr. Thomas A. Newcomer
Ham Station
34950 Hwy 88
Pioneer, CA 95666**

**Prepared by:
Geological Technics Inc.
1101 7th Street
Modesto, California 95354
209-522-4119**

Geological Technics Inc.

1101 7th Street
Modesto, California 95354
(209) 522-4119 / Fax (209) 522-4227

October 26, 2005

Project No.: 808.2
Project Name: Ham Station (Hwy 88)

Mr. Thomas A. Newcomer
Ham Station
34950 Hwy 88
Pioneer, CA

RE: Report: Groundwater Monitoring – 3rd Quarter 2005
Location: Ham Station, 34950 Hwy 88, Pioneer, Amador County, CA

Dear Mr. Newcomer:

Geological Technics Inc. has prepared the following Report for the 3rd Quarter 2005 groundwater-monitoring event at Ham Station, 34950 Highway 88 in Pioneer, CA. The report provides analytical results and discussion of the monitoring/sampling activities conducted at the site on August 27, 2005.

If you have any questions, please contact me at (209) 522-4119.

Respectfully submitted,

Raynold I. Kablanow II, Ph.D.
Vice President

cc: Kirk Larson – CRWQCB-CVR
Bob Fourt – Amador County
USTCF

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Geological Technics Inc. _____

1101 7th Street
Modesto, California 95354
(209) 522-4119 / Fax (209) 522-4227

REPORT

Groundwater Monitoring 3rd Quarter 2005

**Ham Station
34950 Hwy 88
Pioneer, Amador County, CA**

Project No. 808.2
October 26, 2005

EXECUTIVE SUMMARY

This report summarizes the 3rd Quarter 2005 round of groundwater monitoring and testing that took place at the site on August 27, 2005. Monitoring well MW-1 was non-detect above the laboratory detection limits for all analyzed constituents. This is the thirteenth consecutive monitoring event with these results. Monitoring wells (MW-2 through MW-5) were dry and not sampled.

The domestic well was non-detect above the laboratory detection limits for all analyzed constituents. The domestic well has been non-detect for all analyzed constituents since sampling began in October of 1999 with the exception of the November 2001 event.

The groundwater level in MW-1 decreased approximately 3.80 feet since the March 11, 2005 monitoring event. Dissolved oxygen concentration measured in MW-1 was 5.89 ppm. Oxidation-reduction potential was positive in both MW-1 and the domestic well. Field parameters are favorable for aerobic biodegradation.

A summary of groundwater elevation is included as Table 1. A summary of groundwater analytical data is included as Table 2. A summary of water quality parameters is included as Table 3.

1.0 GROUNDWATER MONITORING

1.1 Hydrogeology of Site

Depth-to-groundwater measurements, incorporating the new wells, were performed on August 27, 2005. This is the seventh groundwater-monitoring event since the installation of the new monitoring wells in October 2003. Site-specific groundwater gradient and bearing calculations could not be computed because only one monitoring well (MW-1) had measurable water levels.

On August 27, 2005, the depth to water in MW-1 was 148.83 feet bgs. The groundwater elevation in MW-1 is 5288.23 feet AMSL.

Table 1 in Appendix A contains groundwater elevation, bearing and slope data.

As required under AB2886, the depth to groundwater data was submitted electronically to GeoTracker on October 26, 2005, with confirmation number 3515110611.

1.2 Groundwater Sampling Procedure

Mr. Don Light of Del-Tech Geotechnical Services (Del-Tech) mobilized to the site on August 27, 2005, to sound, purge and sample the site's five groundwater-monitoring wells (MW-1 thru MW-5) and domestic well. Before sampling, the monitoring wells were sounded for depth to water with an electrically actuated sounding tape. The water level reading was recorded to an accuracy of 0.01 foot. No floating product or fuel odors were observed during this sampling event. Monitoring wells MW-2 through MW-5 were dry and could not be sounded.

MW-1 was purged of three well casing volumes of stagnant water using a 4-foot stainless steel bailer. Purging continued until the temperature, conductivity, and pH of the groundwater stabilized (<10% variation between three readings) indicating that formation water representative of aquifer conditions was entering the well. These water quality parameters were measured at intervals of each well volume purged.

Once purging was complete, a water sample was collected, from each well containing enough water, utilizing a 4-foot stainless steel bailer. Care was taken to minimize sample agitation. Once the sample container was filled and capped, the bottle was inverted, tapped, and checked for headspace bubbles. The sample container was identified and labeled with a unique designation, inserted into foam holders and placed in a cooled ice chest for transport to the laboratory.

All non-disposable sampling equipment was decontaminated using a hot water washer and Alconox soap before and between uses. Disposable gloves were used by the technician to collect all samples and were changed with each sample collection.

A chain of custody document, listing all samples collected, accompanied the samples from field to laboratory, thereby providing a means to track their movement and insure their integrity.

All purge water was placed in a 55 gallon DOT approved container, properly labeled and stored on site until its proper disposition can be arranged.

Groundwater monitoring field logs are included in Appendix C.

1.3 Laboratory Analyses

The groundwater samples collected on August 27, 2005, were delivered to Sequoia Analytical of Sacramento, California (ELAP #1624) for analysis of:

- BTEX and Gasoline Range Organics by EPA method 8021/8015
- Diesel Range Organics by EPA method 8015
- MtBE by EPA method 8021/8015

The detection limits for the above analyses are listed in Table 2 of Appendix A, while the lab analytical results are presented in Appendix B.

As required under AB2886, the laboratory data was submitted electronically to GeoTracker on October 26, 2005. The confirmation number is 9550387203.

2.0 FINDINGS AND DISCUSSION

The results of the groundwater sample analyses from the domestic well and MW-1 show the following:

- For the fifth consecutive event, MW-2 was dry.
- For the sixth consecutive event, MW-3, MW-4 and MW-5 were dry and water samples could not be collected.
- Both the domestic well and MW-1 were non-detect above laboratory reporting limits for all analyzed constituents.
- This is the fourteenth consecutive non-detect event for MW-1.
- The domestic well has been non-detect for all analyzed constituents since October of 1999 with one exception noted in the 4th Quarter Monitoring Report – February 4, 2003.
- All other wells were dry and thus groundwater analyses were not performed.

- DO readings are close to saturation levels. Previous measurements of 1.6 to 3.0 ppm are more likely representative of aquifer conditions. If contamination were to reach the water table, the dissolved oxygen levels are favorable for aerobic biodegradation.

3.0 RECOMMENDATIONS

- On October 13, 2005, GTI perform the scope of work outlined in the *Additional Soil Investigation Work Plan* dated August 5, 2005 and approved by Mr. Larson of CRWQCB in a letter dated August 12, 2005. Submission technical report is scheduled for early November 2005.
- Groundwater monitoring will resume until the completion of a CRWQCB *No Further Action Required* review.

4.0 LIMITATIONS

This report was prepared in accordance with the generally accepted standard of care and practice in effect at the time Services were rendered. It should be recognized that definition and evaluation of environmental conditions is an inexact science and that the state or practice of environmental geology/hydrology is changing and evolving and that standards existing at the present time may change as knowledge increases and the state of the practice continues to improve. Further, that differing subsurface soil characteristics can be experienced within a small distance and therefore cannot be known in an absolute sense. All conclusions and recommendations are based on the available data and information.

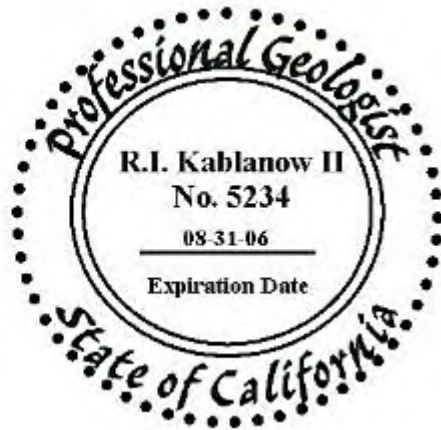
The tasks proposed and completed during this project were reviewed and approved by the local regulatory agency for compliance with the law. No warranty, expressed or implied, is made.

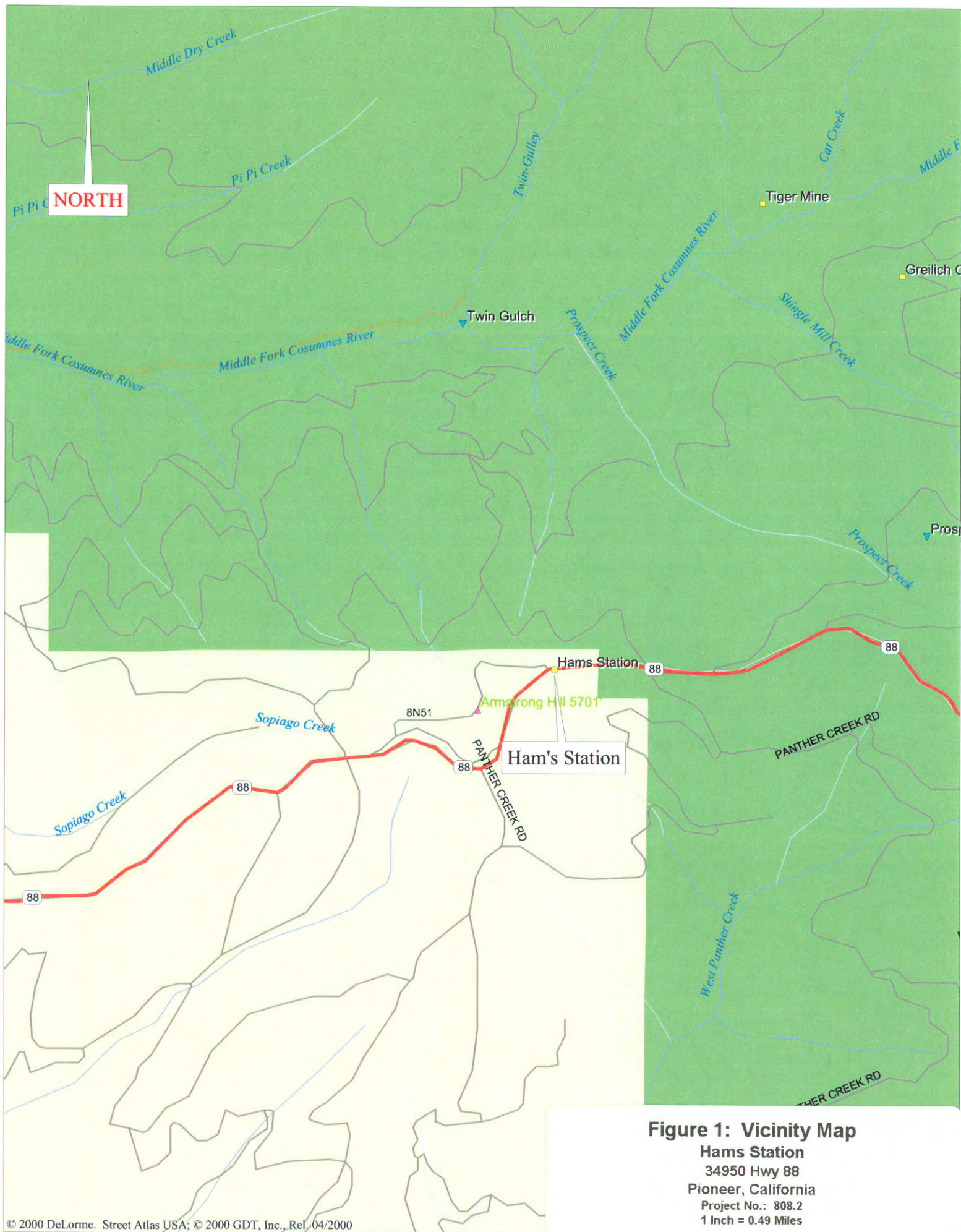
5.0 SIGNATURES AND CERTIFICATION

This report was prepared by:

Eric L. Price
Project Geologist

Raynold Kablanow II, Ph.D.
California Professional Geologist #5234
Certified Hydrogeologist #442





Highway 88

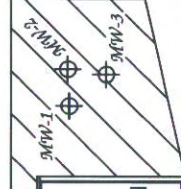
Fog Line

HA-1 ○ HA-2 ○ HA-3 ○

SB-1

MW-5

HA-4 ○



Shed

Patio

Store

Bathroom

Cabin

Cabin

Cabin

EOP



Domestic Well

MW-4

HA-6 ○

Figure 2:

Site Map Ham Station

34950 Hwy 88
Pioneer, CA
Project No. 808.2

Geological Techniques Inc.

9/28/05

LEGEND



Soil Boring Location



Monitoring Well



Hand Auger Sample Points



Domestic Well



Pit Excavation



Structures and Dwellings



Appendix A

Data Tables

Table 1: Summary of Groundwater Elevation, Bearing and Slope

Ham Station
34950 Hwy 88
Pioneer, Amador, CA
Project No. 808.2

Groundwater Monitoring Data									
Date	MW-1 GWL Elev.	MW-2 GWL Elev.	MW-3 GWL Elev.	MW-4 GWL Elev.	MW-5 GWL Elev.	Average Elevation all wells	Average Elevation int wells	Average DTW all wells	*Gradient Bearing Slope ft/ft
TD	168.50	67.29	34.10	65.76	66.21				
TOC	5437.06	5436.92	5436.92	5432.90	5438.61				
03/07/03	5286.54								
07/15/03	5287.86								
10/15/03	5287.21								
12/08/03	5285.20	5382.35	5406.95	5367.51	5381.42	5354.12	5377.09	82.25	S26°E 0.2905
03/28/04	5287.21	5372.59	DRY	5367.83	5374.22	5350.46	5371.55	85.91	S02°W 0.0976
06/11/04	5285.33	DRY	DRY	DRY	DRY	5285.33	NA	151.73	NA
08/31/04	5287.44	DRY	DRY	DRY	DRY	5287.44	NA	149.62	NA
12/14/04	5288.33	DRY	DRY	DRY	DRY	5288.33	NA	148.73	NA
03/11/05	5292.03	DRY	DRY	DRY	DRY	5292.03	NA	145.03	NA
08/27/05	5288.23	DRY	DRY	DRY	DRY	5288.23	NA	148.83	NA
Historical Averages =						5306.56	5374.32	130.30	S12°E 0.1941

*Bearing and Slope determined using MW-2, MW-4 and MW-5

Table 2: Summary of Groundwater Analytical Data

Ham Station
34950 Highway 88
Pioneer, CA
Project No. 808.2

Summary of Groundwater Analytical Data														
Sample Designation	Date Sampled	Benzene ug/L	Toluene ug/L	Ethyl Benzene ug/L	Total Xylenes ug/L	TPH Gasoline ug/L	TEPH Diesel ug/L	MTBE ug/L	DIPE ug/L	ETBE ug/L	TAME ug/L	TBA ug/L	1,2-DCA ug/L	EDB ug/L
MW-1 (175')	10/05/00	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	N/A	ND<5	ND<5	ND<5	ND<5	ND<20	N/A	N/A
	10/06/00	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	N/A	ND<5	ND<5	ND<5	ND<5	ND<20	N/A	N/A
MW-1	10/09/00	62	203	22	154	1230	N/A	85	ND<5	ND<5	ND<5	ND<20	N/A	N/A
	10/16/00	12	5	0.4	14	108	N/A	53	ND<5	ND<5	ND<5	28	ND<0.5	ND<0.5
	12/12/00	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	N/A	31	ND<5	ND<5	ND<5	ND<20	N/A	N/A
	03/14/01	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	N/A	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<11	N/A	N/A
	06/15/01	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	N/A	ND<5	ND<5	ND<5	ND<5	ND<20	N/A	N/A
	09/23/01	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	N/A	ND<5	ND<5	ND<5	ND<5	ND<20	N/A	N/A
	11/09/01	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	N/A	ND<5	ND<5	ND<5	ND<5	ND<20	N/A	N/A
	12/19/02	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<20	N/A	N/A
	03/07/03	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<50	ND<1	ND<5	ND<5	ND<5	ND<10	N/A	N/A
	07/15/03	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<20	N/A	N/A
	10/15/03	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<20	N/A	N/A
	03/28/04	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<20	N/A	N/A
	06/11/04	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<20	N/A	N/A
	08/31/04	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<20	N/A	N/A
MW-2	12/14/04	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<20	N/A	N/A
	03/11/05	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<50	ND<50	ND<2	N/A	N/A	N/A	N/A	N/A	N/A
	08/27/05	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<50	ND<50	ND<2	N/A	N/A	N/A	N/A	N/A	N/A
	03/28/04	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	ND<50	0.62	ND<0.5	ND<0.5	ND<0.5	ND<20	N/A	N/A
	06/11/04							DRY						
MW-3	08/31/04							DRY						
	12/14/04							DRY						
	03/11/05							DRY						
	08/27/05							DRY						
	03/28/04							DRY						
	06/11/04							DRY						
	08/31/04							DRY						
	12/14/04							DRY						

Summary of Groundwater Analytical Data														
Sample Designation	Date Sampled	Benzene ug/L	Toluene ug/L	Ethyl Benzene ug/L	Total Xylenes ug/L	Gasoline ug/L	TEPH Diesel ug/L	MTBE ug/L	DIPE ug/L	ETBE ug/L	TAME ug/L	TBA ug/L	1,2-DCA ug/L	EDB ug/L
MW-3	03/11/05							DRY						
	08/27/05							DRY						
MW-4	03/28/04							DRY						
	06/11/04							DRY						
	08/31/04							DRY						
	12/14/04							DRY						
	03/11/05							DRY						
MW-5	03/28/04							DRY						
	06/11/04							DRY						
	08/31/04							DRY						
	12/14/04							DRY						
	03/11/05							DRY						
Domestic Well	10/26/99	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	04/19/01	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	06/15/01	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	09/23/01	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	11/09/01	ND<0.3	ND<0.3	ND<0.3	ND<0.3	215	N/A	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	12/19/02	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	03/07/03	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	07/15/03	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	10/15/03	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	03/28/04	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	06/11/04	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	08/31/04	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	12/14/04	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
	03/11/05	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A	N/A	N/A	N/A	N/A	N/A
	08/27/05	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A	N/A	N/A
Spring #1	01/18/00	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	N/A	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A
Meyer's Spring	10/05/00	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<0.3	N/A	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	N/A

Table 3: Summary of Water Quality Parameter Data

Ham Station
34950 Highway 88
Pioneer, California
Project No. 808.2

Monitoring Well	MW-1					MW-2					MW-3				
Date	pH	E.C.	°F	ORP	DO	pH	E.C.	°F	ORP	DO	pH	E.C.	°F	ORP	DO
10/16/00	8.02	193	48.7	210	N/A										
12/11/00	7.74	190	49.1	140	N/A										
03/14/01	8.04	197	50.4	122	N/A										
06/15/01	7.62	145	50.9	218	N/A										
09/23/01	7.95	150	50.5	18	N/A										
11/09/01	7.88	150	50.7	156	N/A										
12/19/02	8.32	146	45.0	56	1.56										
03/07/03	7.84	152	50.5	173	1.70										
07/15/03	7.57	170	49.6	129	7.42										
10/15/03	8.45	135	48.7	71	3.10										
03/28/04	8.57	195	50.9	19.4	7.68	8.48	317	51.8	58	3.00	DRY				
06/11/04	7.95	178	50.4	24	7.80	DRY					DRY				
08/31/04	7.97	170	50.7	43	7.50	DRY					DRY				
12/14/04	7.83	162	50.5	11	7.72	DRY					DRY				
03/11/05	7.96	240	50.5	68	6.20	DRY					DRY				
08/27/05	7.97	248	50.7	92	5.89	DRY					DRY				

Monitoring Well	MW-4					MW-5					Domestic Well				
Date	pH	E.C.	°F	ORP	DO	pH	E.C.	°F	ORP	DO	pH	E.C.	°F	ORP	DO
10/16/00															
12/11/00															
03/14/01															
06/15/01															
09/23/01			N/A					N/A			8.10	162	59.9	27	N/A
11/09/01			N/A					N/A			8.07	150	58.6	35	N/A
12/19/02			N/A					N/A			8.23	121	43.4	85	2.40
03/07/03			N/A					N/A			8.10	142	54.9	47	N/A
07/15/03			N/A					N/A			8.18	168	55.9	77.9	N/A
10/15/03			N/A					N/A			8.43	129	51.6	62	N/A
03/28/04			DRY					DRY			8.65	140	47.8	19.9	N/A
06/11/04			DRY					DRY			8.25	145	51.4	83.1	N/A
08/31/04			DRY					DRY			8.22	140	51.1	99.1	N/A
12/14/04			DRY					DRY			8.12	162	50.5	107.8	N/A
03/11/05			DRY					DRY			7.63	202	57.2	67.9	N/A
08/27/05			DRY					DRY			9.23	208	61.7	186.5	N/A

Appendix B
Laboratory Data Sheets



Sequoia
Analytical

COPY

819 Striker Ave Ste 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

20 September, 2005

Geological Technics, Inc.
Geological Technics, Inc.
1101 7th Street
Modesto, CA 95354

RE: Ham's Station
Work Order: S509134

Enclosed are the results of analyses for samples received by the laboratory on 09/07/05 17:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sylvia Krenn
Project Manager

CA ELAP Certificate #1624

Geological Technics, Inc.
1101 7th Street
Modesto CA, 95354

Project: Ham's Station
Project Number: [none]
Project Manager: Geological Technics, Inc.

S509134
Reported:
09/20/05 12:05

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5090098 - EPA 5030B (P/T) / EPA 8015B/8021B
Blank (5090098-BLK1)

Prepared & Analyzed: 09/08/05

Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.0	"							
Surrogate: 4-BFB (FID)	7.25		"	10.0		72	60-140			
Surrogate: a,a,a-TFT (PID)	9.56		"	10.0		96	60-140			

Blank (5090098-BLK2)

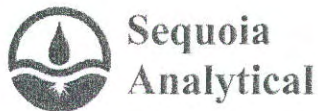
Prepared & Analyzed: 09/09/05

Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.0	"							
Surrogate: 4-BFB (FID)	6.89		"	10.0		69	60-140			
Surrogate: a,a,a-TFT (PID)	8.42		"	10.0		84	60-140			

Laboratory Control Sample (5090098-BS1)

Prepared & Analyzed: 09/08/05

Benzene	9.11	0.50	ug/l	10.0		91	70-130			
Toluene	8.83	0.50	"	10.0		88	70-130			
Ethylbenzene	8.90	0.50	"	10.0		89	70-130			
Xylenes (total)	26.2	0.50	"	30.0		87	70-130			
Methyl tert-butyl ether	9.35	2.0	"	10.0		94	70-130			
Surrogate: 4-BFB (FID)	8.19		"	10.0		82	60-140			
Surrogate: a,a,a-TFT (PID)	8.83		"	10.0		88	60-140			



819 Striker Ave Ste 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

Geological Technics, Inc.
1101 7th Street
Modesto CA, 95354

Project: Ham's Station
Project Number: [none]
Project Manager: Geological Technics, Inc.

S509134
Reported:
09/20/05 12:05

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 5090098 - EPA 5030B (P/T) / EPA 8015B/8021B

Laboratory Control Sample (5090098-BS2)

Prepared & Analyzed: 09/09/05

Benzene	9.74	0.50	ug/l	10.0		97	70-130			
Toluene	9.57	0.50	"	10.0		96	70-130			
Ethylbenzene	9.43	0.50	"	10.0		94	70-130			
Xylenes (total)	27.9	0.50	"	30.0		93	70-130			
Methyl tert-butyl ether	10.1	2.0	"	10.0		101	70-130			
Surrogate: 4-BFB (FID)	7.76		"	10.0		78	60-140			
Surrogate: a,a,a-TFT (PID)	9.53		"	10.0		95	60-140			

Matrix Spike (5090098-MS1)

Source: S508677-03

Prepared: 09/08/05 Analyzed: 09/09/05

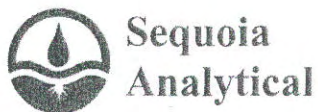
Benzene	8.97	0.50	ug/l	10.0	ND	90	60-140			
Toluene	8.62	0.50	"	10.0	ND	86	60-140			
Ethylbenzene	8.66	0.50	"	10.0	ND	87	60-140			
Xylenes (total)	25.5	0.50	"	30.0	ND	85	60-140			
Methyl tert-butyl ether	9.88	2.0	"	10.0	ND	99	60-140			
Surrogate: 4-BFB (FID)	7.88		"	10.0		79	60-140			
Surrogate: a,a,a-TFT (PID)	8.98		"	10.0		90	60-140			

Matrix Spike Dup (5090098-MSD1)

Source: S508677-03

Prepared: 09/08/05 Analyzed: 09/09/05

Benzene	9.08	0.50	ug/l	10.0	ND	91	60-140	1	25	
Toluene	8.61	0.50	"	10.0	ND	86	60-140	0.1	25	
Ethylbenzene	8.73	0.50	"	10.0	ND	87	60-140	0.8	25	
Xylenes (total)	25.7	0.50	"	30.0	ND	86	60-140	0.8	25	
Methyl tert-butyl ether	10.4	2.0	"	10.0	ND	104	60-140	5	25	
Surrogate: 4-BFB (FID)	7.89		"	10.0		79	60-140			
Surrogate: a,a,a-TFT (PID)	8.99		"	10.0		90	60-140			



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Geological Technics, Inc.
1101 7th Street
Modesto CA, 95354

Project: Ham's Station
Project Number: [none]
Project Manager: Geological Technics, Inc.

S509134
Reported:
09/20/05 12:05

Extractable Hydrocarbons by EPA 8015B - Quality Control
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 5090109 - EPA 3510C / EPA 8015B-SVOA

Blank (5090109-BLK1)

Prepared & Analyzed: 09/09/05

Diesel Range Organics (C10-C28)	ND	50	ug/l							
Surrogate: Octacosane	15.8		"	20.0		79	50-150			

Laboratory Control Sample (5090109-BS1)

Prepared & Analyzed: 09/09/05

Diesel Range Organics (C10-C28)	441	50	ug/l	500		88	60-140			
Surrogate: Octacosane	16.9		"	20.0		84	50-150			

Laboratory Control Sample Dup (5090109-BSD1)

Prepared & Analyzed: 09/09/05

Diesel Range Organics (C10-C28)	541	50	ug/l	500		108	60-140	20	50	
Surrogate: Octacosane	21.0		"	20.0		105	50-150			

Geological Technics, Inc. 1101 7th Street Modesto CA, 95354	Project:Ham's Station Project Number:[none] Project Manager:Geological Technics, Inc.	S509134 Reported: 09/20/05 12:05
---	---	---

Notes and Definitions

HT-01	This sample was received beyond the EPA recommended holding time.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



DEL-TECH GEOTECHNICAL SUPPORT

10624 OLIVE AVE. / OAKDALE, CA. 95361

(209) 847-8757 / (209) 847-7744 FAX / deltech1@pacbell.net

Laboratory Chain of Custody / 2005

BILLING TO:
GEOLOGICAL TECH.

PROJECT NAME: HAM'S SATION / 34950 HWY. 88 / PIONEER, CA.

PROJECT I.D. / GLOBAL I.D. # T0600500051

Client: GEOLOGICAL TECHNIKS

Report Attention: ERIC PRICE

Sheet: 1 OF 1

Phone: (209) 622-4119

FAX: (209) 622-4227

P.O. # 808-5593

Lab.: SEQUOIA

Sample Container / Preserv.: 4 VOA'S / HCL ~ 1-1LTR. / NEAT

Sample Description / Location: MW-1

Sample Description / Location: MW-2 / DRY

Sample Description / Location: MW-3 / DRY

Sample Description / Location: MW-4 / DRY

Sample Description / Location: MW-5 / DRY

Sample Description / Location: DW-1

Sampling Info:

Date: 8/27/2005

Date: 8/27/2005

Date: 8/27/2005

Date: 8/27/2005

Date: 8/27/2005

Date: 8/27/2005

Date: 8/27/2005

Date: 8/27/2005

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Date: 8/27/2005

Date: 8/27/2005

Date: 8/27/2005

MONITORING WELL

GROUNDWATER PROFILE

TPH - GASOLINE / 8021B

TPH - DIESEL / 8015M

B.T.E.X. (8021B)

M.T.B.E. (8021B)

8260 U.S.T. OXYGENATES

(M.T.B.E., D.I.P.E., T.A.M.E., E.T.B.E., T.B.A.)

1,2 DCA

EDB

TOTAL LEAD

EDF REPORTING

Rush Priority (1-Day, 2-Day, 5-Day)

STANDARD = (S)

QC Report Type: Level [12 [13 [14]]] Formal COC Required: []

Signature	Print Name	Company	Date	Time
	DON LIGHT	DEL-TECH GEOTECH.	8/29/05	14:15
	Jenny Weese	G.T.I.	8/27/05	14:15
	Harold Brown	A.L.S.O. Inc.	9-07-05	15:17
	Harold Brown	"	9-07-05	17:10
	Harold Brown	"	9/7/05	17:10

SPECIAL INSTRUCTIONS / NOTES:

1 DW-1 was frozen and top was popped off

Appendix C

Groundwater Monitoring Field Logs

COPY



**2005
GROUNDWATER
FIELD MONITORING
SUMMARY REPORT**

SITE:

**HAM'S STATION
34950 HIGHWAY 88
PIONEER, CA
August 27, 2005**



DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2005

SAMPLE LOCATION / MW -		1		DATE:		8/27/2005			
PROJECT NAME:		HAM'S STATION		ANALYSIS PERFORMED:		SEE CHAIN OF CUSTODY			
ADDRESS:		34950 HIGHWAY 88		SAMPLE TIME:		10:40			
CITY, STATE:		PIONEER, CA		SAMPLE CONTAINERS:		4 V.O.A.'S / 1 LITER NEAT			
SITE CONTACT:		TOM NEWCOMER		PRESERVATIVES:		HCL			
CONSULTANT:		GEOLOGICAL TECHNICS		LAB. ANALYSIS BY:		SEQUOIA			
PROJECT MANAGER:		ERIC PRICE		MONUMENT:		FLUSH			
SAMPLER:		DEL-TECH / DON LIGHT		WELL CASING MATERIAL		PVC			
SIGNED:		<i>Don Light</i>		WELL CASING DIA. :		2" /		0.1632	
SAMPLE MEDIA:		GROUNDWATER		P.I.D. READING / ODOR:		N/A		NONE	
TOP OF CASING ELEVATION:		MSL		COLOR:		CLEAR			
DEPTH TO WATER:		(feet.100th's) 148.83		FEET		CALC. PURGE VOL.:		3.21 GAL.	
DEPTH OF WELL:		(feet.100th's) 168.50		FEET		TOTAL VOLUME PURGED:		9.63 GAL.	
STANDING WATER COLUMN:		19.67		FEET		DEPTH OF PUMP:		168 FEET	
FIELD PARAMETERS									
TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E. C. (UmMHOS)	TEMP. (Celsius)	O.R.P. (Mvolts)	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	N/A	.5 GPM	8.73	203	10.9	114.8	5.25	CLEAR
	3.21	"	"	8.35	237	10.5	110	5.54	"
	6.42	"	"	8.04	244	10.5	96	5.59	"
	9.63	"	"	7.97	248	10.4	92	5.89	"
PURGE METHOD:		4' STAINLESS STEEL BAILER.							
SAMPLE METHOD:		4' STAINLESS STEEL BAILER.							
D. T. W. AFTER PURGE:		D. T. W. AT SAMPLE TIME: 154.47'							
WELL INTEGRITY:		CAP & SEAL ARE SECURE.							
WELL LOCATION:		SEE SITE MAP.							
REMARKS:		DOMESTIC WELL PH = 9.23 / E.C.= 208 / TEMP.= 16.5 / O.R.P.= 186.5 / CLEAR							
WEATHER:		CLEAR / COLD				WIND: NONE			
QUALITY CONTROL:		ALL PURGING EQUIPMENT AND SAMPLING EQUIPMENT WAS CLEANED IN THE FIELD WITH A STEAMCLEANER & ALCONOX SOAP. NEW NITRILE GLOVES.							
CONTAINMENT:		D.O.T. 17 55 GAL. STEEL DRUM OR 60 GAL. POLY DRUM.							
INSTRUMENTATION:		Y.S.I. 3560 FLOWCELL				Y.S.I. DISSOLVED OXYGEN METER			
		SOLINIST SLOPE METER				THERMODINE 580B P.I.D.			
		KECK INTERFACE METER				TURBIDITY METER			
# OF DRUMS ON SIGHT:		WATER:		1		SOIL:		0	



DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2005

SAMPLE LOCATION / MW -

2

DATE:

3/11/2005

PROJECT NAME: HAM'S STATION
ADDRESS: 34950 HIGHWAY 88
CITY, STATE: PIONEER, CA
SITE CONTACT: TOM NEWCOMER
CONSULTANT: GEOLOGICAL TECHNICS

ANALYSIS PERFORMED: NONE
SAMPLE TIME: NO SAMPLE TAKEN
SAMPLE CONTAINERS: N/A
PRESERVATIVES: N/A
LAB. ANALYSIS BY: N/A

PROJECT MANAGER: ERIC PRICE
SAMPLER: DEL-TECH / DON LIGHT
SIGNED: *Don Light*
SAMPLE MEDIA: GROUNDWATER
TOP OF CASING ELEVATION: MSL
DEPTH TO WATER: (feet.100th's) DRY FEET
DEPTH OF WELL: (feet.100th's) 67.16 FEET
STANDING WATER COLUMN: #VALUE! FEET

MONUMENT: FLUSH
WELL CASING MATERIAL: PVC
WELL CASING DIA.: 2" / 0.1632
P.I.D. READING / ODOR: N/A N/A
COLOR: N/A
CALC. PURGE VOL.: N/A GAL.
TOTAL VOLUME PURGED: N/A GAL.
DEPTH OF PUMP: 67 FEET

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E. C. (UmMHOS)	TEMP. (Celsius)	O.R.P. (Mvolts)	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	DRY							
	N/A								

PURGE METHOD: N/A

SAMPLE METHOD: N/A

D. T. W. AFTER PURGE:

D. T. W. AT SAMPLE TIME: N/A

WELL INTEGRITY: CAP & SEAL ARE SECURE.

WELL LOCATION: SEE SITE MAP.

REMARKS:

WEATHER: CLEAR / COLD

WIND: NONE

QUALITY CONTROL: ALL PURGING EQUIPMENT AND SAMPLING EQUIPMENT WAS CLEANED IN THE FIELD WITH A STEAMCLEANER & ALCONOX SOAP. NEW NITRILE GLOVES.

CONTAINMENT: D.O.T. 17 55 GAL. STEEL DRUM OR 60 GAL. POLY DRUM.

INSTRUMENTATION:

Y.S.I. 3560 FLOWCELL

Y.S.I. DISSOLVED OXYGEN METER

SOLINIST SLOPE METER

THERMODINE 580B P.I.D.

KECK INTERFACE METER

TURBIDITY METER



DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2005

SAMPLE LOCATION / MW -		3		DATE:		3/11/2005			
PROJECT NAME:		HAM'S STATION		ANALYSIS PERFORMED:		NONE			
ADDRESS:		34950 HIGHWAY 88		SAMPLE TIME:		NO SAMPLE TAKEN			
CITY, STATE:		PIONEER, CA		SAMPLE CONTAINERS:		N/A			
SITE CONTACT:		TOM NEWCOMER		PRESERVATIVES:		N/A			
CONSULTANT:		GEOLOGICAL TECHNIQS		LAB. ANALYSIS BY:		N/A			
PROJECT MANAGER:		ERIC PRICE		MONUMENT:		FLUSH			
SAMPLER:		DEL-TECH / DON LIGHT		WELL CASING MATERIAL		PVC			
SIGNED:		<i>Don Light</i>		WELL CASING DIA. :		2" /		0.1632	
SAMPLE MEDIA:		GROUNDWATER		P.I.D. READING / ODOR:		N/A		N/A	
TOP OF CASING ELEVATION:		MSL		COLOR:		N/A			
DEPTH TO WATER:		(feet.100th's) DRY FEET		CALC. PURGE VOL.:		N/A		GAL.	
DEPTH OF WELL:		(feet.100th's) 34.10 FEET		TOTAL VOLUME PURGED:		N/A		GAL.	
STANDING WATER COLUMN:		#VALUE! FEET		DEPTH OF PUMP:		N/A		FEET	
FIELD PARAMETERS									
TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E. C. (UmMHOS)	TEMP. (Celsius)	O.R.P. (Mvolts)	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	DRY							
	N/A								
PURGE METHOD: N/A SAMPLE METHOD: N/A D. T. W. AFTER PURGE: D. T. W. AT SAMPLE TIME: N/A WELL INTEGRITY: CAP & SEAL ARE SECURE. WELL LOCATION: SEE SITE MAP. REMARKS: WEATHER: CLEAR / COLD WIND: NONE QUALITY CONTROL: ALL PURGING EQUIPMENT AND SAMPLING EQUIPMENT WAS CLEANED IN THE FIELD WITH A STEAMCLEANER & ALCONOX SOAP. NEW NITRILE GLOVES. CONTAINMENT: D.O.T. 17 55 GAL. STEEL DRUM OR 60 GAL. POLY DRUM. INSTRUMENTATION: Y.S.I. 3560 FLOWCELL Y.S.I. DISSOLVED OXYGEN METER SOLINIST SLOPE METER THERMODINE 580B P.I.D. KECK INTERFACE METER TURBIDITY METER									



DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2005

SAMPLE LOCATION / MW -

4

DATE:

3/11/2005

PROJECT NAME: HAM'S STATION
ADDRESS: 34950 HIGHWAY 88
CITY, STATE: PIONEER, CA
SITE CONTACT: TOM NEWCOMER
CONSULTANT: GEOLOGICAL TECHNIQS

ANALYSIS PERFORMED: NONE
SAMPLE TIME: NO SAMPLE TAKEN
SAMPLE CONTAINERS: N/A
PRESERVATIVES: N/A
LAB. ANALYSIS BY: N/A

PROJECT MANAGER: ERIC PRICE
SAMPLER: DEL-TECH / DON LIGHT
SIGNED: *Don Light*
SAMPLE MEDIA: GROUNDWATER

MONUMENT: FLUSH
WELL CASING MATERIAL: PVC
WELL CASING DIA.: 2" / 0.1632
P.I.D. READING / ODOR: N/A N/A
COLOR: N/A
CALC. PURGE VOL.: N/A GAL.
TOTAL VOLUME PURGED: N/A GAL.
DEPTH OF PUMP: N/A FEET

TOP OF CASING ELEVATION: MSL
DEPTH TO WATER: (feet.100th's) DRY FEET
DEPTH OF WELL: (feet.100th's) 65.20 FEET
STANDING WATER COLUMN: #VALUE! FEET

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E. C. (UmMHOS)	TEMP. (Celsius)	O.R.P. (Mvolts)	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	DRY							
	N/A								

PURGE METHOD: N/A

SAMPLE METHOD: N/A

D. T. W. AFTER PURGE:

D. T. W. AT SAMPLE TIME: N/A

WELL INTEGRITY: CAP & SEAL ARE SECURE.

WELL LOCATION: SEE SITE MAP.

REMARKS:

WEATHER: CLEAR / COLD

WIND: NONE

QUALITY CONTROL: ALL PURGING EQUIPMENT AND SAMPLING EQUIPMENT WAS CLEANED IN THE FIELD WITH A STEAMCLEANER & ALCONOX SOAP. NEW NITRILE GLOVES.

CONTAINMENT: D.O.T. 17 55 GAL. STEEL DRUM OR 60 GAL. POLY DRUM.

INSTRUMENTATION:

Y.S.I. 3560 FLOWCELL

Y.S.I. DISSOLVED OXYGEN METER

SOLINIST SLOPE METER

THERMODINE 580B P.I.D.

KECK INTERFACE METER

TURBIDITY METER



DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2005

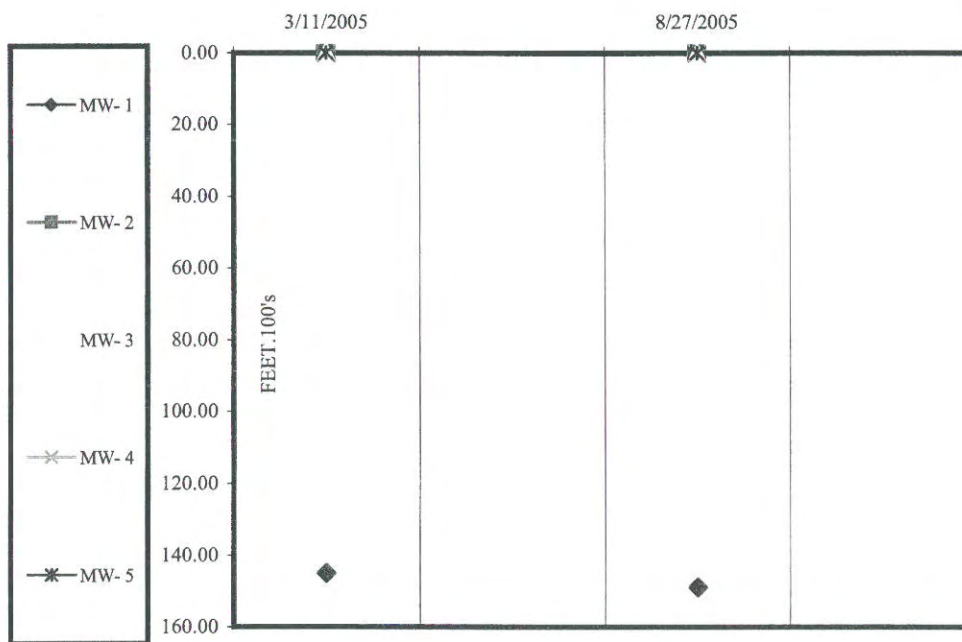
SAMPLE LOCATION / MW -		5		DATE:		3/11/2005			
PROJECT NAME: HAM'S STATION									
ADDRESS:		34950 HIGHWAY 88				ANALYSIS PERFORMED:		NONE	
CITY, STATE:		PIONEER, CA				SAMPLE TIME:		NO SAMPLE TAKEN	
SITE CONTACT:		TOM NEWCOMER				SAMPLE CONTAINERS:		N/A	
CONSULTANT:		GEOLOGICAL TECHNICS				PRESERVATIVES:		N/A	
						LAB. ANALYSIS BY:		N/A	
PROJECT MANAGER:		ERIC PRICE				MONUMENT:		FLUSH	
SAMPLER:		DEL-TECH / DON LIGHT				WELL CASING MATERIAL		PVC	
SIGNED:		<i>Don Light</i>				WELL CASING DIA. :		2" / 0.1632	
SAMPLE MEDIA:		GROUNDWATER				P.I.D. READING / ODOR:		N/A N/A	
TOP OF CASING ELEVATION:		MSL				COLOR:		N/A	
DEPTH TO WATER:		(feet.100th's)		DRY		CALC. PURGE VOL.:		N/A GAL.	
DEPTH OF WELL:		(feet.100th's)		65.80		TOTAL VOLUME PURGED:		N/A GAL.	
STANDING WATER COLUMN:		#VALUE!		FEET		DEPTH OF PUMP:		N/A FEET	
FIELD PARAMETERS									
TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E. C. (UmMHOS)	TEMP. (Celsius)	O.R.P. (Mvolts)	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	DRY							
	N/A								
PURGE METHOD:		N/A							
SAMPLE METHOD:		N/A							
D. T. W. AFTER PURGE:						D. T. W. AT SAMPLE TIME:		N/A	
WELL INTEGRITY:		CAP & SEAL ARE SECURE.							
WELL LOCATION:		SEE SITE MAP.							
REMARKS:									
WEATHER:		CLEAR / COLD				WIND:		NONE	
QUALITY CONTROL:		ALL PURGING EQUIPMENT AND SAMPLING EQUIPMENT WAS CLEANED IN THE FIELD WITH A STEAMCLEANER & ALCONOX SOAP. NEW NITRILE GLOVES.							
CONTAINMENT:		D.O.T. 17 55 GAL. STEEL DRUM OR 60 GAL. POLY DRUM.							
INSTRUMENTATION:		Y.S.I. 3560 FLOWCELL				Y.S.I. DISSOLVED OXYGEN METER			
		SOLINIST SLOPE METER				THERMODINE 580B P.I.D.			
		KECK INTERFACE METER				TURBIDITY METER			



HAM'S STATION
34950 HWY. 88 / PIONEER, CA.

MONITORING WELL FIELD SUMMARY LOG 2005

DEPTH TO WATER MEASUREMENTS



D.T.W. CHART

NOTE:

ALL MEASUREMENTS ARE MADE FROM THE NORTH SIDE AND TOP EDGE OF THE WELL CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.